File

STATE OF UTAH
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS, AND MINING
1588 West North Temple
Salt Lake City, Utah 84116
(801) 533-5771

M E M O R A N D U M
* * * * * * * * * * *

TO: Board of Oil, Gas and Mining

FROM: Thomas J. Suchoski, Engineering Geologist

SUBJECT: Executive Summary
Utah International
Comstock Mine
ACT/021~~/004~~-001
Iron County

DATE: May 28, 1980

The Board's concurrence is sought to the Division's decision that it will issue tentative approval to the mining and reclamation plan for the company's open pit iron mining operation near Cedar City, Utah.

The operation is located in Section 1, 2, 3, 25, 29, 30, 31, 34, 35, and 36, Township 36 and 37 South, Ranges 13 and 14 West. 750 acres comprises the area affected by the mine related facilities. vs 714 in exec. summary to be reclaimed

I hope that the attached executive summary will provide you with the necessary information.

TJS/te

E X E C U T I V E S U M M A R Y
* * * * * * * * * * * * * * * *

Utah International

Comstock Mine
ACT/021/004
Iron County, Utah

Location:

The Utah International Iron mining operation lies west of Cedar Valley about 14 miles west of Cedar City, Utah. The proposal as set forth in the company's mining and reclamation plan includes the presently operating Comstock open pit iron mine. The possibility of underground iron mining is mentioned in the plan as a future alternative but is not included in the application for an approved mining and reclamation plan. See the map located in the appendix for the exact location of the mine.

Geology and Soils:

The surface geology of the area of mining operations is a mixture of alluvium, colluvium and intermediate igneous rock. Soils in the general area are classified as in the fine, loamy, mixed, mesic family of Aridic Calcic Argixerolls; and as in the loamy-skeletal, mixed family of Typic Argiborolls. Typically, that which could be referred to as topsoil in the general area of the mine, is found to be 0'6" in depth.

Hydrology:

Surface hydrology in the area is classified as having permeability lying in the moderate slow category. Runoff is slow to medium and the erosion hazard is slight to moderate. The surface drainage channels that are developed have developed in a dry, subhumid environment and subjected to periodic scouring from summer storm activity.

Little is known of the subsurface hydrology in the area. It is known that water is encountered at the 6450' level at the Comstock pit and that the company anticipates additional water at depth. Quantity of flow could be characterized as average at 50 gallons per minute in the Iron Mountain area and 100 gallons per minute in the Comstock pit. It is believed that any water encountered is resultant from perched water tables.

Water is pumped from the Comstock pit to a closed basin drainage and does not flow outside the mining area. After low-level use of the mine discharge water by livestock and wildlife, the water seeps into the alluvium.

Ecology:

The Utah International operation lies on the transition zone between the Pinyon Juniper and Shadscale Saltbush vegetal types. Most of the mine work area lies within the Pinyon-Juniper type at about 6100 feet in elevation.

Plants representative of the area covered by the mining operation are galleta grass, cheat grass, Indian ricegrass, suirreltail, threewan, big sagebrush, fourwing saltbrush, rabbitbrush, palmer penstemon, halogeton, Russian Thistle, Utah juniper, mountain mohogany, cliffrose, serviceberry and pinyon pine.

Much of the area affected is subject to livestock grazing but access is limited in the pit and operation area. Wildlife use by game species is limited to mostly winter use by mule deer and resident chukklar and cottontail rabbits. Nongame wildlife species present and in part using the area are various raptors, ground squirrels, mice, rats, and other rodents.

The area is not known to include any rare or endangered species or habitats. Due to its isolation from prime summer deer range, the area could not be considered as critical deer winter range.

Structures and Facilities:

This area is located in the Pinto Iron Mining District and therefore is amidst the remnants of much in the way of old workings. The proposal includes the active mining work now proceeding in the Comstock pit. In 1969, mining stopped in the Iron Mountain Area which includes the Blowout and Duncan Mines.

The proposal includes the construction of a tailings dam, waste rock facility, office, concentrator and processing facility, and feed stockpiling facilities.

Mining and Reclamation:

Both the Comstock pit and the Duncan pit are developed on 25 foot lifts on a 1/2 to 1 slope with a permanent safety bench left every 75 feet, vertically resulting in a 45° overall slope.

Drilling and blasting will be conducted and loading done with shovels of 6-11 cubic yard capacity into haul trucks of 35 to 80 ton capacity. Shot rock is hauled to waste dumps and ore is hauled to a crusher which produces minus 8 inch material which is screened and processed on site and then shipped by rail.

The reclamation objective is to obtain a suitable self sustaining vegetative cover consistent with the post mining land uses of livestock grazing and limited wildlife habitat.

An M-10 commitment has been filed for this operation.

Utah International requests variances for Rule M-10(5) and (8). Rule M-10(5) is for highwalls and Rule M-10(8) is for natural drainage blockage. Both of these variances were approved by the Board for the Cedar City operations previously.

Due to the lack of large amounts of topsoil, the revegetation philisophy will be to treat waste dump material by using such methods as scarifying, using mulch and fertilizing to develop a suitable plant support medium.

Revegetation testing to try the operator's proposed revegetation practices is committed to by the operator. Previously developed revegetation practices by Utah International in the same area will be utilized in addition to those practices developed in the future.

Impacts:

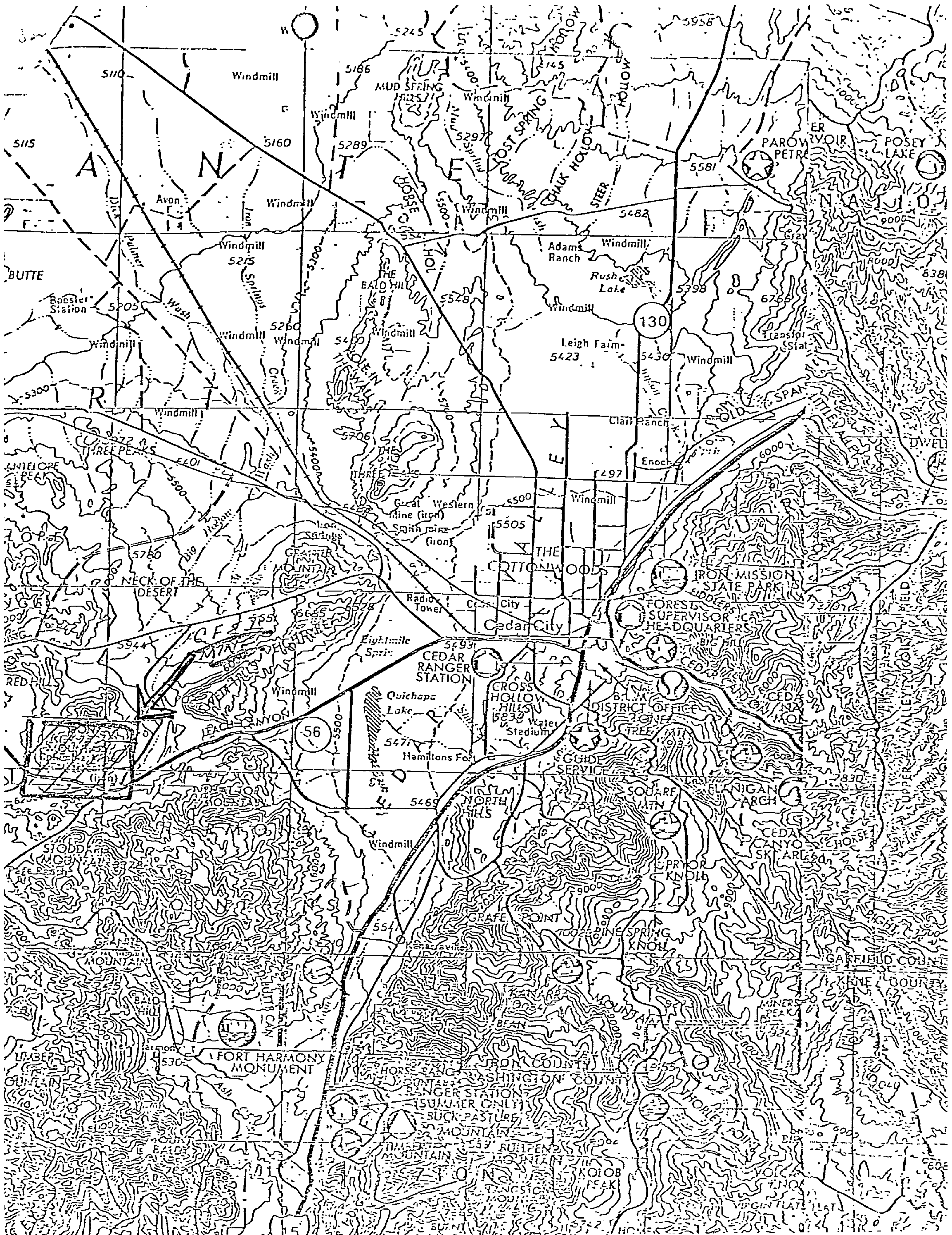
Due to the pre-existing nature of this operation it is not anticipated that its immediate or long term impacts will be significant.

Surety Estimate:

The company has been asked for its estimate of surety to cover reclamation of the 714 acres of the area to be disturbed. The final surety proposal will be made ~~at~~ the Board's June meeting.

Application History:

March 1976	Field inspection done in conjunction with Utah International's Iron Springs Iron Mines by Ron Daniels and Jim Carter.
May 14, 1980	Formal application made by ~~CF&I Steel~~ ? UII ? for an approved Notice of ~~Intention to~~ Commence Mining Operations.



Windmill
MUD SPRING HILLS
CHALK HOLLOW
STEER
5160
5289
5581
PAROWAN
POSEY LAKE
Avon
5482
Adams Ranch
Rush Lake
BUTTE
Booster Station
5205
5215
5260
5398
130
Leigh Farm
5423
5430
THE BALD HILLS
5548
Clark Ranch
THREE PEAKS
ANTELOPE PEAK
5706
Enoch
5497
6000
Great Western Mine (iron)
Smith mine (iron)
5505
5780
NECK OF THE DESERT
THE COTTONWOODS
IRON MISSION STATE PARK
Radio Tower
Cedar City
FOREST SUPERVISOR HEADQUARTERS
5944
Eightmile Spring
CEDAR RANGER STATION
CROSS HOLLOW HILLS
B.L.M. DISTRICT OFFICE
Windmill
Quichapa Lake
LEACH CANYON
56
Stadium
Hamiltons Fort
GUIDE SERVICE
SQUARE MTN
FLANIGAN ARCH
5469
NORTH HILLS
STODDARD MOUNTAIN
CEDAR CANYON SKI AREA
PRYOR KNOLL
GRAFF POINT
PINE SPRING KNOLL
Kanarraville
GARFIELD COUNTY
KANE COUNTY
KANARRA MOUNTAIN
BUTTE CAN
FORT HARMONY MONUMENT
IRON COUNTY
WASHINGTON COUNTY
RANGER STATION (SUMMER ONLY)
BUCK PASTURE MOUNTAIN
KOLOB PEAK
VIRGIN FLAT